

ILLUSTRATED PARTS BREAKDOWN

861A thru F POWER CONTROLLER

HOW TO USE THE IPB

GENERAL

This IPB is compiled following the organization and nomenclature of the engineering drawing structure.

MAJOR ASSEMBLY LOCATOR

The Major Assembly Locator (first illustration) is an index that provides a description and a figure reference for all illustrations used in this manual.

INDENTED PARTS LIST

This manual identifies each assembly being broken down (figure reference callout), and all parts of that assembly. Further breakdown of an assembly is shown by an asterisk (*) preceding the item callouts in the Description Column. The number of asterisks preceding an item is used to denote the subordination of that item with respect to the Major Assembly. A single asterisk preceding an item description indicates that the item is part of the major assembly being illustrated. Items that are subordinate to single asterisks items, are denoted by two asterisks (**) and immediately follow the related single asterisk item. Additional asterisks are used, as required, to denote further subordination. This system of part identification, provides a means for the user to identify the next higher assembly item and make alternate selections for parts when the required replacement part or assembly is not immediately available.

COLUMN CALLOUT DESCRIPTION

Figure & Item — Indicates the figure number and item number of each part.

Description — Lists the name of the part and pertinent specifications (when required). Asterisks preceding the description denote the subordination of the part to the next higher assembly.

DEC Part No. — Lists the DEC part ordering number. A blank in this column indicates a DEC part number was not assigned at the time of publication.

ECO Cut-In — The notation at the top of this column indicates the ECO level of the system (option), at which the IPB was initially prepared. Subsequent ECO level designations, that modify existing parts or add new parts to the device, are inserted in the ECO Cut-In column next to the part that is added or modified. A bracket ([]) preceding the item description is used to indicate the parts affected by ECO's.

Vendor Code/Part No. — Indicates vendor parts that are not stocked by DEC. Refer to the Field Service Spares Catalog (vendor part number to DEC part number) for the vendor code cross-reference.

Used On Code — Letters in this column correspond to the variation codes assigned in Figure 1. Parts with an Alpha notation(s) are used only in those option variations. A blank indicates that the part is used on all option variations.

Ref Fig No. — A cross reference between illustrations. For each Major Assembly, the number in this column denotes the figure of the next higher assembly. For all subassemblies, the number in this column denotes the figure showing additional detailed breakdown.

SYMBOL USAGE

Hardware Designators — Alpha designators for screws (S), washers (W), nuts (N), and retaining rings (R) are inserted after the item number callouts on the illustration when stacked item numbers are used.

Attaching Hardware — The @ symbol is inserted before any part that is used as attaching hardware. Attaching hardware is denoted as those parts that are not an integral part of the referenced assembly.

(NFR) Not Field Repairable — The (NFR) symbol is inserted after any assembly that is not to be field dismantled.

Other Symbols — Any other symbols that are required for kits, accessories, etc., will be explained and appear as part of the item description.

REVISION HISTORY				OTHER IPB MANUALS REQUIRED TO SUPPORT THIS OPTION
PRINTING	ECO LEVEL		DATE	
5th Printing	861	00003-00021	3-1-82	N/A
	54-10206	00000-00001		
	861D	00000-00009		
	861E	00000-00006		
This 5th Printing EK-00861-IP-005 SUPERSEDES 4th Printing EK-00861-IP-004				

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DEC is not responsible for errors which may appear in the technical description (including illustrations and photographs) of the products covered by this manual.

None of the descriptions contained in this manual imply the granting of any license whatsoever to make, use or sell equipment constructed in accordance therewith.

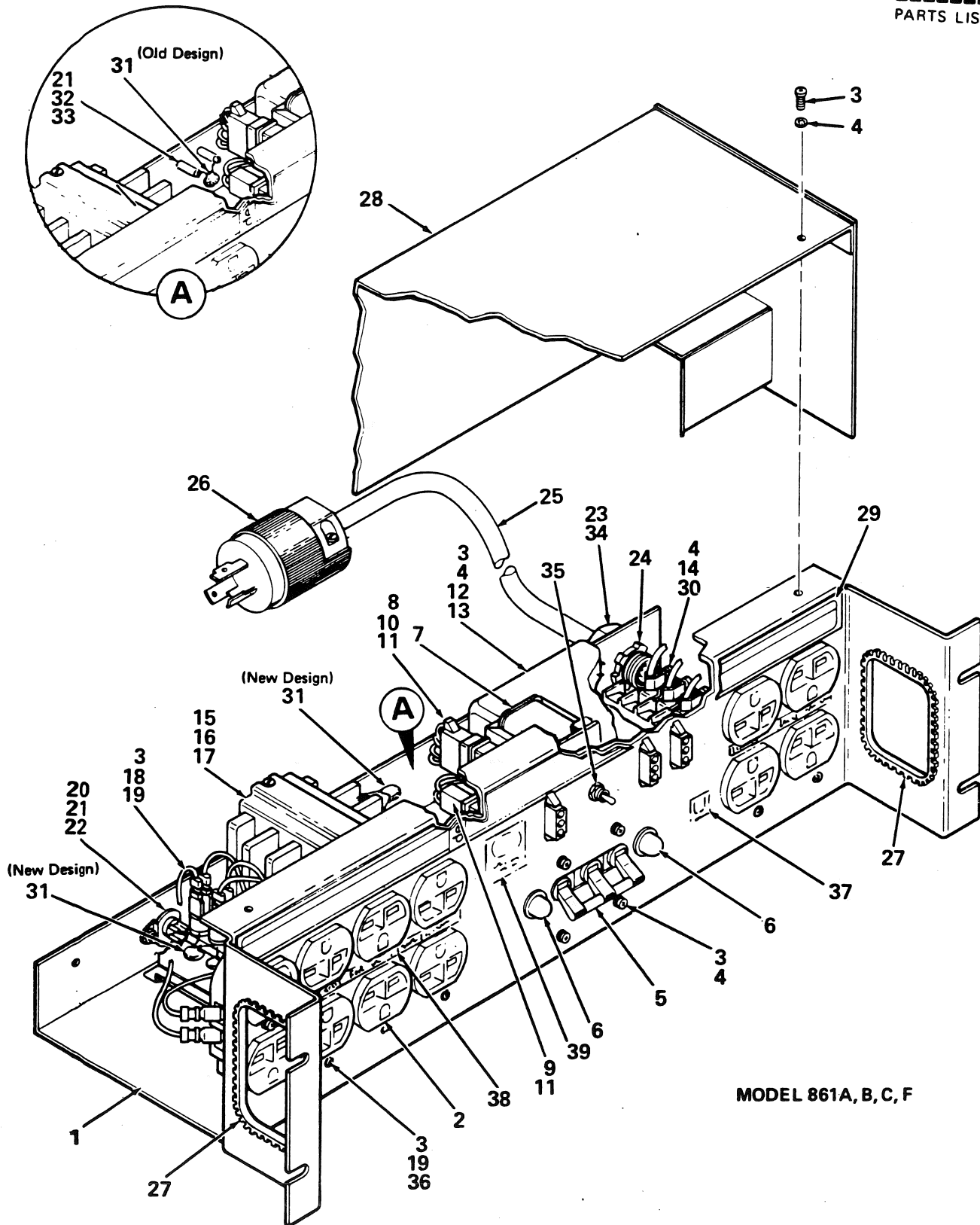


Figure 1. Model 861A,B,C,F Power Controller Assembly

861-01

FIG. & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN 861 00003	USED ON CODE	REF FIG NO.
1-	MODEL 861 POWER CONTROL ASSEMBLY				
	Code A — Used on Model 861-A 115V	861-A		A	
	Code B — Used on Model 861-B 230V	861-B		B	
	Code C — Used on Model 861-C 115V	861-C		C	
	Code D — Used on Model 861-F 115V (added)	861-F	00007	D	
1	*Chassis	74-10567-00			
2	*Receptacle, (P1 through P6) 15A, 115V (deleted)	12-05351-00		A,C,D	
	*Receptacle, (P1 through P6) 20A, 120V (added)	12-12265-00	00010	A,C,D	
	*Receptacle, (P1 through P6) 15A, 230V (deleted)	12-11204-00		B	
	*Receptacle, (P1 through P6) 15A, 240V (added)	12-11204-01	00010	B	
3	*Screw, Phl Pan Hd No. 6-32 x 5/16 Lg.	90-06021-01			
4	*Washer, Int Tooth Lock No. 6	90-06633-00			
5	*Circuit Breaker (CB1) 20, 20, 30A, 115V (deleted)	12-11196-00		C	
	*Circuit Breaker (CB1) 20, 20, 3AA, 115V (added)	12-11196-02	00010	B,C	
	*Circuit Breaker (CB1) 20A, 3 Pole, 230V (deleted)	12-11142-00		A,B	
	*Circuit Breaker (CB1) 20A, 3 Pole, 230V (added)	12-11142-01	00010	A	
	*Circuit Breaker (CB1) (added)	12-11196-01	00007	D	
	*Circuit Breaker (CB1) (deleted)	12-11196-01		D	
	*Circuit Breaker (CB1) (added)	12-11196-03	00010	D	
6	*Lamp Power (11, 12) 115V	12-05303-00			
7	*PILOT CONTROL BOARD ASSEMBLY (deleted — See Note 1)	54-10206-00			2
	*PILOT CONTROL BOARD ASSEMBLY (added — See Note 1)	54-11522-00	00010		
8	*Housing, 4 Pin Female (deleted — See Note 1)	12-10821-04			
	*Connector, (P15), Universal, 4 Pin (added — See Note 1)	12-12167-01	00010		
9	*Housing, 2 Pin Male (deleted — See Note 1)	12-10822-02			
	*Connector, (P14, P16), Universal, 2 Pins (added — See Note 1)	12-12167-02	00010		
10	*Pin, Female (deleted — See Note 1)	12-09379-01	00010		
11	*Pin Male (deleted — See Note 1)	12-09378-01			
	*Pins, (P14-16) Connector Universal (added — See Note 1)	12-12170-00	00010		
12	*Filter (F1), 3 Pole, 4 Wire (230V) (added)	12-11157-00		A	
	*Filter (F1), 3 Pole, 4 Wire (230V) (added)	12-13069-00	00012	A	
	*Filter (F1), 2 Pole, 3 Wire (115V) (deleted)	12-11199-00		B,C,D	
	*Filter (F1), 2 Pole, 3 Wire (added)	12-13070-00	00014	B,C,D	
13	*Washer, Ext Tooth Lock No. 6	90-07649-00			
14	*Clamp, Terminal (230V) (deleted)	12-11223-00	00012	A	
	*Clamp, Terminal (115V) (deleted)	12-11223-01	00012	B,C,D	
15	*Contactor (K1) (115V) (deleted)	12-11147-00		A,C,D	
	*Contactor (K1) (115V) (added)	12-12266-01	00010	A,C,D	
	*Contactor (K1) (230V) (deleted)	12-11147-01		B	
	*Contactor (K1) (230V) (added)	12-12266-00	00010	B	

FIG. & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN 861 00003	USED ON CODE	REF FIG NO.
1-					
16	*Screw, Phl Pan Hd No. 8-32 x 3/8 Lg.	90-06037-01			
17	*Nut, Kep No. 8-32	90-06563-00			
18	*Capacitor (C1) .10 MFD	10-00034-00			
19	*Nut, Kep No. 6-32	90-06560-00			
20	*Thermostat (T1)	12-11158-00			
21	*Screw, Phl Pan Hd No. 4-40 x 1/4 Lg. (deleted)	90-08301-01			
	*Screw, Phl Pan Hd No. 4-40 x 5/16 Lg. (added)	90-06010-01	00010		
22	*Nut, Kep No. 4-40	90-06557-00			
23	*Strain Relief (Green) (115V)	12-11198-01		A,C	
	*Strain Relief (Blue) (230V)	12-11198-00		B	
24	*Locknut	90-09309-00			
25	*Power Cord 15 ft. 12/4 (115V)	17-00026-00		A	
	*Power Cord 15 ft. 14/3 (230V) (deleted)	17-00027-00		B	
	*Power Cord 15 ft. 14/3 (230V) (added)	17-00027-01	00014	B	
	*Power Cord 15 ft. 12/3 (115V)	17-00025-00		C	
	*Power Cord 9 ft. w/plug (added)	17-00006-09	00007	D	
26	*Plug, Male 125/250V 20A	12-11045-00		A	
	*Plug, Male 250V 20A	12-11192-00		B	
	*Plug, Male 125V 30A	12-11193-00		C	
27	*Grommet, Caterpillar	90-07035-00			
28	*Cover	74-10568-00			
29	*Name Plate (861-A)	36-11216-00		A	
	*Name Plate (861-B)	36-11217-00		B	
	*Name Plate (861-C)	36-11218-00		C	
	*Name Plate (861-F) (added)	36-12382-00	00007	D	
30	*Washer, Int Tooth Lock No. 8	90-06634-00		A,C,D	
31	*Surge Limiter (SL1) (added)	13-11996-01	00006	A,C,D	
	*Surge Limiter (SL1) (deleted)	13-11996-01		A,C,D	
	*Surge Limiter (SL1) (added)	13-11996-00	0008A	A,C,D	
	*Surge Limiter (SL1) (deleted) (See Note 2) (old design)	13-11996-00		A,C,D	
	*MOV Varistor (R1) (added) (See Note 2) (new design)	70-11052-01	00009	A,C,D	
	*MOV Varistor (R1) (deleted) (See Note 1)	70-11052-01		A,C,D	
	*MOV Varistor (R1-R3) (added) (See Note 1)	13-11996-00	00010	A,C,D	
	*Surge Limiter (SL1) (added)	13-11996-02	00006	B	
	*Surge Limiter (SL1) (deleted) (See Note 2) (old design)	13-11996-02		B	
	*MOV Varistor (R1) (added) (See Note 2) (new design)	70-11052-00	00009	B	
	*MOV Varistor (R1) (deleted) (See Note 1)	70-11052-00		B	
	*MOV Varistor (R1-R2) (added) (See Note 2)	13-11996-02	00010	B	
32	*Stand-off, Insulated No. 4-40 (added)	90-08420-00	00006		
	*Stand-off, Insulated No. 4-40 (deleted)	90-08420-00	00009		
33	*Washer, Int Tooth Lock No. 4 (added)	90-06632-00	00006		
	*Washer, Int Tooth Lock No. 4 (deleted)	90-06632-00	00009		
34	*Strain Relief (white) (added)	12-11198-06	00016	D	

FIG. & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN 861 00003	USED ON CODE	REF FIG NO.
1-					
35	*Washer, Fiber (added)	90-08076-00	00010	D	
	*Washer, Fiber (deleted)	90-08076-00	00019		
36	*Screw, Phl Fan Hd No. 6-32 x 3/8 (added)	90-06022-01	00010		
37	*Decal, "UL" (added)	36-12063-00	00009		
38	*Decal, "Not for External Loads" (added)	74-16582-00	00010		
	*Decal, "Not for External Loads" (deleted)	74-16582-00			
	*Decal, "Not for External Loads" (added)	36-17154-00	00017		
39	*Decal, "Outlet 240 Vac" (added)	74-16581-00	00012	B	
	Decals (Not Shown)				
	*Decal, "Danger H.V." (added)	36-10267-00	00009		
	*Decal, "Safety Ground" (added)	36-10268-01	00009		
	*Decal, CSA (added)	36-13211-01	00017		
	*Decal (added)	36-13210-02	00021		
	*Decal, "Cable ID" (added)	36-16073-01	00020		
	Note 1: Changed per ECO 861-00010 except if Power Controller is at Rev. F1 per ECO 861-00011.				
	Note 2: Proper Varistor(s) should be ordered with caution by checking illustration.				

FIG. & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN 54-10206 00000	USED ON CODE	REF FIG NO.
2-	PILOT CONTROL BOARD ASSEMBLY (deleted)	54-10206-00	861 00010		1
1	*Board, Etched (Rev. B)	50-10205-00			
2	*Capacitor, (C1) 50 MFD, 50V 6%	10-00080-00			
3	*Diode, (D1-D5) 1N4004	11-05796-00			
4	*Transformer, (T1)	16-11178-00			
5	*Relay	12-11179-00			
6	*Switch, 3 Position (S1)	12-11180-00			
7	*Connector, (J1-J3) 3 Pin Mate-N-Lok	12-09350-03			
8	*Connector, (J4) 2 Pin Mate-N-Lok	12-10821-02			
9	*Terminal, (J1-J4) Socket Contact	12-09456-00			
10	*Connector, (J5) 4 Pin Mate-N-Lok	12-09351-04			
11	*Terminal, (J5) Pin Contact	12-10823-00			

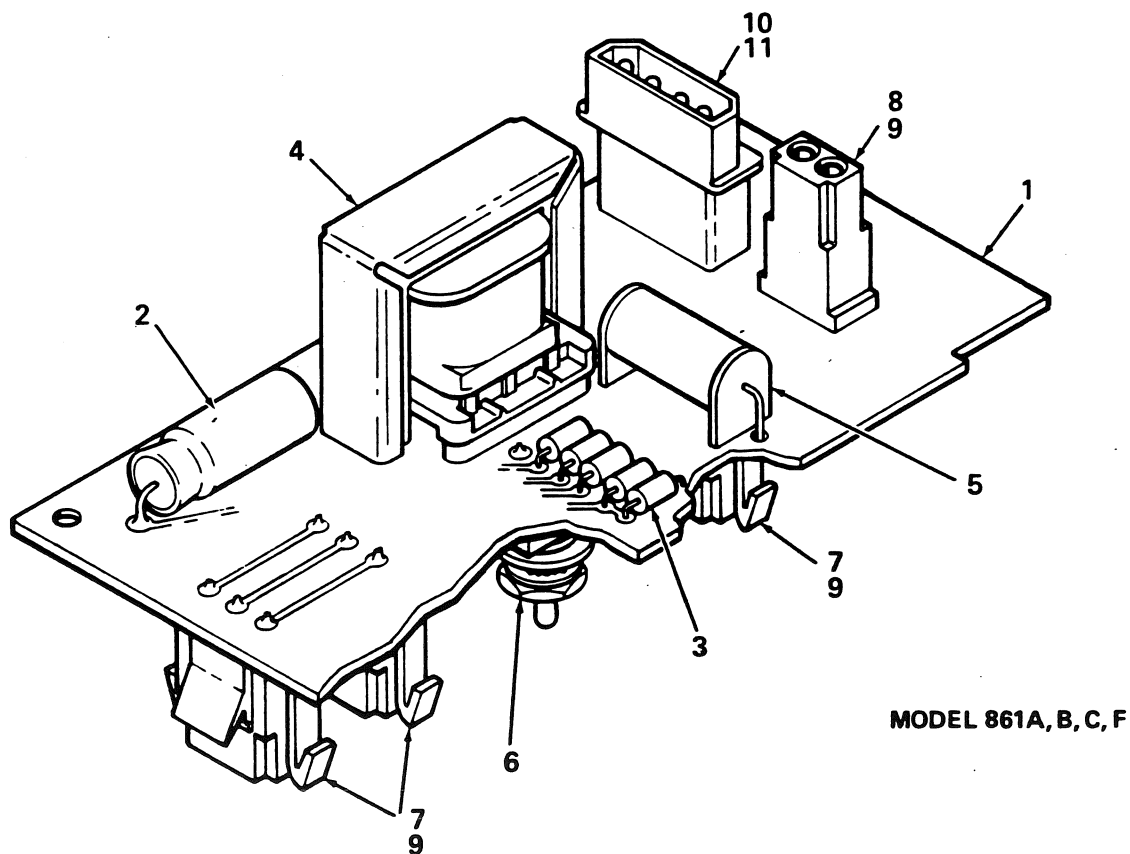
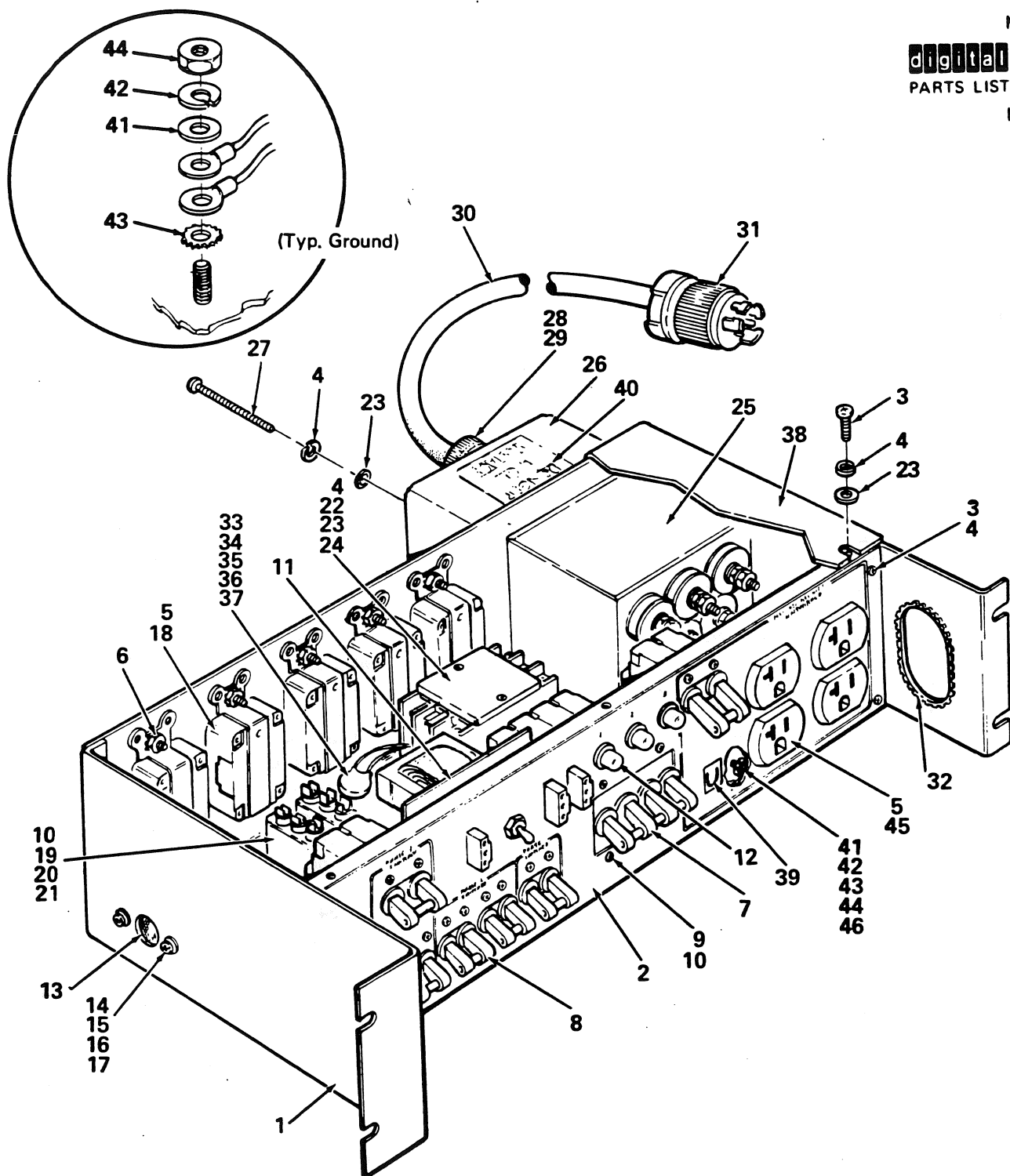


Figure 2. Pilot Control Board Assembly (Etch Rev. B)



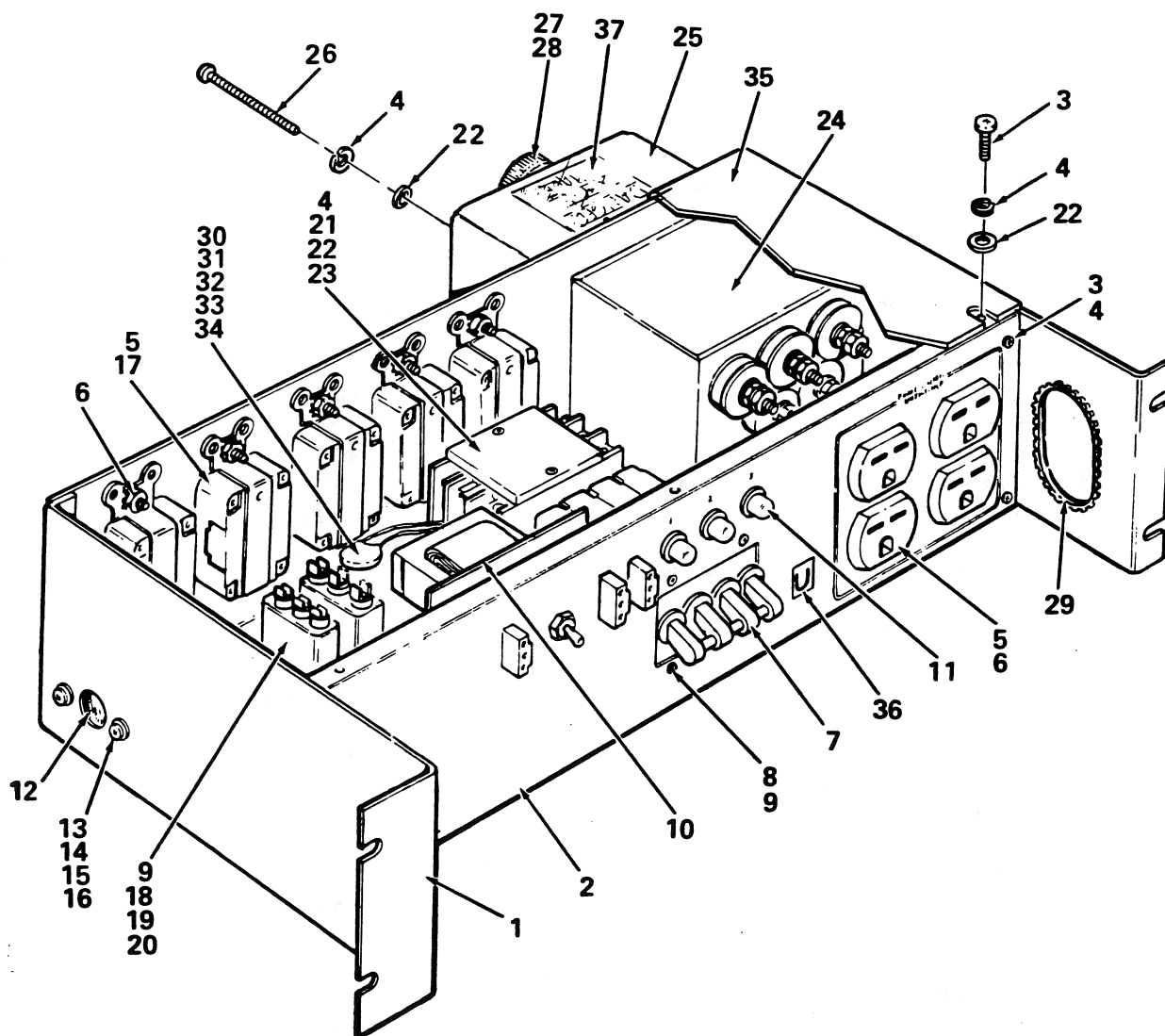
MODEL 861D

861-03

Figure 3. Model 861-D Power Controller Assembly (115V)

FIG. & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN 861D 00000	USED ON CODE	REF FIG NO.
3-	MODEL 861-D POWER CONTROL ASSEMBLY (115V)	861-D			
1	*Chassis	74-13232-00			
2	*Panel, Front (861-D)	74-13233-00			
3	*Screw, Phl Pan Hd No. 8-32 x .38	90-06037-01			
4	*Washer, Split Lock No. 8	90-06690-00			
5	*Receptacle, Power Conn. (J1 through J7) 125 Vac 20A	12-12265-00			
6	*Nut, Kep No. 6-32	90-08185-00			
7	*Circuit Breaker (CB7) 4 Pole, 240 Vac, 30A	12-11037-02			
8	*Circuit Breaker (CB1 through CB6) 2 Pole, 240 Vac, 20A (deleted)	12-12124-01			
	*Circuit Breaker, 2 Pole, 240 Vac, 20A (added)	12-12124-05	00007		
9	*Screw, Phl Pan Hd No. 6 x 32 x .25	90-06020-01			
10	*Washer, Split Lock No. 6	90-07801-00			
11	*PILOT CONTROL BOARD ASSEMBLY	54-11522-00			
12	*PILOT LAMP ASSEMBLY	70-11053-00			
13	*Thermostat SPST, Fixed Temp.	12-11158-00			
14	*Screw, Phl Pan Hd No. 4-40 x .31	90-06010-01			
15	*Washer, Flat No. 4	90-06655-00			
16	*Washer, Split Lock No. 4	90-06688-00			
17	*Nut, Hex No. 4-40	90-06556-00			
18	*Screw, Phl Pan Hd No. 6-32 x .31	90-06021-01			
19	*Capacitor, (C1, C2) DC Paper 1000 Vdc	10-00034-00			
20	*Washer, Flat No. 6	90-06653-00			
21	*Nut, Hex No. 6-32	90-06558-00			
22	*Contactor (K1) 3 Pole, 600 Vac 40A (deleted)	12-12266-00			
	*Contactor (K1) 3 Pole, 600 Vac 40A (added)	12-12266-01	00005		
23	*Washer, Flat No. 8	90-06660-00			
24	*Nut, Hex No. 8-32	90-06561-00			
25	*Filter	12-12320-00			
26	*Bracket, Strain Relief	74-13419-00			
27	*Screw, Phl Pan Hd No. 8-32 x 3.0 Lg.	90-06051-01			
28	*Strain Relief	12-12410-00			
29	*Locknut, (1/2" Pipe Thread) (deleted)	90-09309-00			
	*Locknut, (3/4" Pipe Thread) (added)	90-09309-01	00003		
30	*Power Cord, 5 Wire, 10 AWG (15 ft.)	17-00028-00			
31	*Plug, Twist Lock, 4 Pole, 5 Wire	12-12314-00			
32	*Grommet, Caterpillar	90-07035-00			
33	*VARISTOR ASSEMBLY	70-11052-00			
34	**Varistor 275 Vac	13-11996-02			
35	**Tubing, TFE Thin Wall	91-07278-00			
36	**Terminal, Ring Torque (deleted)	90-07929-00	7011052		
	*Lug Solder (added)	90-06765-00	00001		
37	*Washer, Int Tooth No. 6	90-06633-00			

FIG. & ITEM NO.	DESCRIPTION	DEC PART NO.	ECO CUT-IN 861D 00000	USED ON CODE	REF FIG NO.
3-					
38	*Cover, Power Control	74-13234-00			
39	*Decal, "UL"	36-12063-00			
40	*Decal, "Danger High Voltage"	36-10267-00			
41	*Washer, Flat No. 10 (added)	90-06660-00	00009		
42	*Washer, Lock No. 10 (added)	90-07906-00	00009		
43	*Washer, External Tooth Lock No. 10 (added)	90-07651-00	00009		
44	*Nut, Hex No. 10-32 (added)	90-06564-00	00009		
45	*Nut, Hex No. 6-32 (added)	90-06560-00	00009		
46	*Decal, Ground (added)	36-12680-01	00009		
	Decals (Not Shown)				
	†Decal, "Not For External Loads" (added)	74-16582-01	00005		



MODEL 861E

861-04

Figure 4. Model 861-E Power Controller Assembly (230V)

FIG. & ITEM NO.	DESCRIPTION	DEC PART NO.	E ECO CUT-IN 861E 00000	USED ON CODE	REF FIG NO.
4-	MODEL 861-E POWER CONTROL ASSEMBLY (230V)	861-E			
1	*Chassis	74-13232-00			
2	*Panel, Front (861-E)	74-13235-00			
3	*Screw, Phl Pan Hd No. 8-32 x .38	90-06037-01			
4	*Washer, Split Lock No. 8	90-06690-00			
5	*Receptacle, Power Conn. (J1 through J7) 240 Vac 15A	12-11204-01			
6	[*Nut, Kep No. 6-32 (deleted)	90-08185-00			
	[*Nut, Kep No. 6-32 (added)	90-06560-00	00006		
7	*Circuit Breaker, 240 Vac 15A	12-12321-00			
8	*Screw, Phl Pan Hd No. 6-32 x .25	90-06020-01			
9	*Washer, Split Lock No. 6	90-07801-00			
10	*PILOT CONTROL BOARD ASSEMBLY	54-11522-00			
11	*PILOT LAMP ASSEMBLY (11, 12, 13) 240V	70-11053-01			
12	*Thermostat, SPST, Fixed Temp.	12-11158-00			
13	*Screw, Phl Pan Hd No. 4-40 x .31	90-06010-01			
14	*Washer, Flat No. 4	90-06655-00			
15	*Washer, Split Lock No. 4	90-06688-00			
16	*Nut, Hex No. 4-40	90-06556-00			
17	*Screw, Phl Pan Hd No. 6-32 x .31	90-06021-01			
18	*Capacitor, (C1, C2) DC Paper, 1000 Vdc	10-00034-00			
19	*Washer, Flat No. 6	90-06653-00			
20	*Nut, Hex No. 6-32	90-06558-00			
21	*Contractor, (K1) 3 Pole, 600 Vac, 40A	12-12266-00			
22	*Washer, Flat No. 8	90-06660-00			
23	*Nut, Hex No. 8-32	90-06561-00			
24	*Filter	12-12320-00			
25	*Bracket, Strain Relief	74-13419-00			
26	*Screw, Phl Pan Hd No. 8-32 x 3.0 Lg.	90-06051-01			
27	*Strain Relief	12-12410-00			
28	[*Locknut, No. 1/2 (deleted)	90-09309-00			
	[*Locknut, No. 1/2 (added)	90-09309-01	00006		
29	*Grommet, Caterpillar	90-07035-00			
30	*VARISTOR ASSEMBLY	70-11052-00			
31	**Varistor 275-Vac	13-11996-02			
32	**Tubing, TFE Thin Wall	91-07278-00			
33	**Terminal, Ring Torque (deleted)	90-07929-00	7011052		
	[**Lug Solder (added)	90-06765-00	00001		
34	*Washer, Int Tooth No. 6	90-06633-00			
35	*Cover, Power Control	74-13234-00			
36	*Decal, "UL"	36-12063-00			
37	*Decal, "Danger High Voltage"	36-10267-00			
	Decal (Not Shown)				
	†Decal, "Not For External Loads" (added)	74-16582-01	00005		
					DEC

ILLUSTRATED PARTS BREAKDOWN COMMENT SHEET

Any and all comments and suggestions for correcting errors and/or additional information to improve this manual will be reviewed and researched for possible use when this manual is revised and/or reprinted. Enter your comments and suggestions in the form provided below and return to Technical Documentation.

MODEL . 861A—F POWER CONTROLLER

PUBLICATION NO. . EK00861-IP-005

FIGURE NO. _____ ITEM NO. _____

CHANGE FROM _____

CHANGE TO _____

FIGURE NO. _____ ITEM NO. _____

CHANGE FROM _____

CHANGE TO _____

FIGURE NO. _____ ITEM NO. _____

CHANGE FROM _____

CHANGE TO _____

FIGURE NO. _____ ITEM NO. _____

CHANGE FROM _____

CHANGE TO _____

FIGURE NO. _____ ITEM NO. _____

CHANGE FROM _____

CHANGE TO _____

FIGURE NO. _____ ITEM NO. _____

CHANGE FROM _____

CHANGE TO _____

ADDITIONAL COMMENT(S)

Please describe your position. _____

Name _____ Organization _____

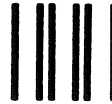
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